UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,212	09/26/2003	Maurice Smith	34171	2888

23589 7590 05/10/2010

HOVEY WILLIAMS LLP
10801 Mastin Blvd., Suite 1000
Overland Park, KS 66210

EXAMINER	
RIVIERE, HEIDI M	
ART UNIT	PAPER NUMBER
3689	

MAIL DATE	DELIVERY MODE
05/10/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/672,212	SMITH ET AL.	
	Examiner	Art Unit	
	HEIDI RIVIERE	3689	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 October 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4 and 6-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4 and 6-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed **8 October 2009** have been fully considered but they are not persuasive.

2. Applicant argues that the Wyatt reference does not teach "the report comprising an image of the substance". The Barnes reference addresses the taking, compilation and outputting of images and therefore addresses these concerns

3. Please note the previously applied claim objection is withdrawn. Please also note that the 35 USC 112 paragraphs 1 and 2 as well as the 35 USC 101 rejections are withdrawn.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in Graham v. John Deere Co,, 383 U.S. 1,148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows: 1. Determining the scope and contents of the prior art. 2. Ascertaining the differences between the prior art and the

claims at issue. 3. Resolving the level of ordinary skill in the pertinent art. 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. **Claims 1-4, 6-8, and 10-11** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Wyatt (US 6490530)** in view of **Barnes (US 6/422,508)**.

2. **With respect to claim 1, (Currently Amended)** Wyatt discloses a method of evaluating a threat posed by substance (reference provides an aerosol hazard classification and early warning network, see abstract), the method comprising the steps of:

b. generating a report with the control unit (detector stations capable of measuring and classifying aerosol particles, col. 8 lines 34 -44 and a need for spectroscopic techniques was recognized in the early 1970's, col. 3, lines 5-10, col. 12, lines 20-25, “The CPU will collect and process such identification or classification results to determine other aerosol particle properties following the on-board CPU instructions." and col. 14, lines 3-11, "Such information includes estimates of threat characteristics..." and detector stations capable of measuring and classifying aerosol particles, col. 8 lines 34 - 44 and "detector stations," are capable of performing a set of scattered light measurements by which the target aerosol particles are well classified and/or identified, one-at-a-time, at each locale where they are detected. Col. 5, lines 25- 29);

c. uploading the report, <u>via the control unit,</u> to a secure remote server via a system chosen from the group consisting of a cell phone network and a satellite phone network (detector stations capable of measuring and classifying aerosol

particles, and reporting all processed data via integrated telecommunications to a central control station, col. 8 lines 29-45 and col. 3, lines 36-52, "communications/telemetry module") (See also, American Heritage Dictionary “n. The Science and technology of automatic measurement and transmission of data by wire, radio, or other means from remote sources, as from space vehicles, to receiving stations for recording and analysis”);

d. notifying, via the control unit, at least some members of a hierarchy authorities, wherein the evaluation authorities, including threat response authorities and evaluation authorities, include, including a plurality of experts having knowledge relevant to making a high-level threat assessment (interpreted to be the sending of threat analyses to various civil, police, emergency and other agencies responsible for population health and safety throughout and surrounding the monitored region, col. 13 line 65 - col. 14 line 3 – telemetry means used; col. 10, lines 25-40 “the telemetry means incorporated into each detector station permits data processed by the detector station's on-board computer to be transmitted in real time to the central station that monitors the evolution of the reports received from the individual stations, makes judgments as to the extent of the aerosol threat, if any, and determines the type of warning required for each region specified as protected. The central station can transmit commands to each or any of the detector stations to change local data acquisition rates and modify duty cycler, as needed. The central station also can modify data processing

protocols, i.e. the analytical software on-board each detector station.") (Examiner notes that these agencies are response and evaluation authorities.); and

e. instructing at least some members of the hierarchy of authorities, via the control unit, to access the report on the remote server via a wide area network (interpreted to be the access of various respective threat analyses by civil, police, emergency and other agencies responsible for population health and safety throughout and surrounding the monitored region through telemetry means, col. 13 line 65 - col. 14 line 3; col. 10, lines 25-40 "the telemetry means incorporated into each detector station permits data processed by the detector station's on-board computer to be transmitted in real time to the central station that monitors the evolution of the reports received from the individual stations, makes judgments as to the extent of the aerosol threat, if any, and determines the type of warning required for each region specified as protected. The central station can transmit commands to each or any of the detector stations to change local data acquisition rates and modify duty cycler, as needed. The central station also can modify data processing protocols, i.e. the analytical software on-board each detector station.") (Examiner notes that these agencies are response and evaluation authorities.).

Wyatt does teach generating a report and the citations above, Wyatt does not teach following, however **Barnes** teaches,

b. the report comprising the image of the substance and identification information regarding the substance as determined by the control unit; (Barnes: Col. 5, lines

35-67; col. 6, lines 15-40; col. 10, lines 20-50 – images are gathered, tracked and outputted)

a1. obtaining an image of the substance with one or more remotely controllable sensing units; a2. transmitting the image of the substance from the one or more remotely controllable sensing units to a control unit configured to automatically identify the substance; (Barnes: col. 5, line 42 – col. 6 line 45 – "The system 20 of the present invention advantageously allows for gathering and tracking images. The system 20 preferably includes a vehicle mounting interface 21 positioned to be connected to a vehicle. The vehicle mounting interface includes a remotely steerable gimbal 30 which provides at least two axis of pivotal or rotational movement. A compact pod housing 25 is pivotally mounted to the vehicle mounting interface 21 and has at least one window 26, and more preferably a plurality of windows 26,27,28,29 as illustrated in FIGS. 1-6. A spectral sensor 40 is positioned on the steerable gimbal 30 within the pod housing 25 to thereby enable off-nadir scanning, target acquisition, target tracking and analysis of spectral data through the at least one window 26 of the pod housing 25."; col. 16, claim 34 – steps of digitally transmitting spectral data)

Furthermore, while Barnes does not explicitly disclosed wherein the step of uploading is to a secure remote server. However, it would have been obvious to one of ordinary skill at the time of the invention to have understood and used a secure server

since the Barnes system is used for counter-terrorism, counter-proliferation of weapons of mass destruction and rocket tracking for example (Barnes: col. 9).

It would have been obvious and predictable to one of ordinary skill in the art at the time of the invention to combine the teachings of Wyatt and Barnes. Wyatt teaches an aerosol hazard characterization and early warning network. The system monitors aerosol intrusions. The Barnes system teaches a system for robotic control of imaging data having stearable gimbal mounted on spectral sensor and methods. The system is robotic controlled and highly mobile. The gas and images are tracked and uploaded.

3. **With respect to claim 2**, **(Previously Presented)** Wyatt discloses a method of evaluating a threat posed by a substance, further including the steps of providing the remote server with evaluation tools for automatically evaluating, the report in light of other relevant data (interpreted to be the evaluation of the threat posed by and likely movement of the aerosol cloud by the central station, integrated with meteorological data, col. 13 lines 41 - 43, 51 - 54 and 60 - 63).

4. **With respect to claim 3**, **(Previously Presented)** Wyatt discloses a method of evaluating a threat posed by substance (reference provides an aerosol hazard classification and early warning network, see abstract), the method comprising the steps of:

f. deploying a plurality of remote sensing units and a control unit adapted to automatically detect and identify the substance and to provide a corresponding report, wherein the report includes a magnified image of the substance (detector stations capable of measuring and classifying aerosol particles, col. 8 lines 34 -

44 and "detector stations," are capable of performing a set of scattered light measurements by which the target aerosol particles are well classified and/or identified, one-at-a-time, at each locale where they are detected. Col. 5, lines 25-29) (Examiner notes that this results in a magnified image);

g. uploading the report, via the control unit, to a remote server (detector stations capable of measuring and classifying aerosol particles, and reporting all processed data via integrated telecommunications to a central control station, col. 8 lines 29 - 45);

i. notifying, via the control unit, the appropriate local reporting authority of the report in accord with the appropriate local reporting policy (threat analyses are sent to various civil, police and emergency agencies, col. 13 lines 65 - col. 14 line 3);

j. determining , via the control unit, a hierarchy of threat evaluators, including a plurality of experts having knowledge relevant to making a high-level threat assessment (interpreted to be the sending of threat analyses to various civil, police, emergency and other agencies responsible for population health and safety throughout and surrounding the monitored region, col. 13 line 65 - col. 14 line 3); and

k. instructing at least some members of the hierarchy of threat evaluators to access the report on the remote server via a wide area network (interpreted to be the access of various respective threat analyses by civil, police, emergency and other agencies responsible for population health and safety throughout and

surrounding the monitored region through telemetry means, col. 13 line 65 - col. 14 line 3; col. 13 line 65 - col. 14 line 3; col. 10, lines 25-40 "the telemetry means incorporated into each detector station permits data processed by the detector station's on-board computer to be transmitted in real time to the central station that monitors the evolution of the reports received from the individual stations, makes judgments as to the extent of the aerosol threat, if any, and determines the type of warning required for each region specified as protected. The central station can transmit commands to each or any of the detector stations to change local data acquisition rates and modify duty cycler, as needed. The central station also can modify data processing protocols, i.e. the analytical software on-board each detector station.").

Wyatt discloses all the above limitation, but does not explicitly disclose wherein the determining step is provided by a GPS device located on the remote sensing unit, communicating the actual geographic location to the control unit, however **Barnes** teaches,

h. determining an actual geographic location of a remote sensing unit detecting the substance using the remote sensing unit, communicating the actual geographic location to the control unit, and identifying an appropriate local reporting authority and an appropriate local reporting policy based upon the actual geographic location of the remote sensing unit detecting the substance; (Barnes: col. 4, lines 35-45; col. 7, line 5- col. 8, line 35; col. 9; col. 11, lines1-42 – A high capacity cable is attached to the vehicle "the cable can be customized

or optimized for various types of communication standards as understood by those skilled in the art; system used for counterterrorism, counter proliferation of weapons etc.; global positioning system used (GPS) data used to computed spectral sensor location; programmed inputs via processing means which uses a GUI interface)

a1. obtaining an image of the substance with one or more remotely controllable sensing units; a2. transmitting the image of the substance from the one or more remotely controllable sensing units to a control unit configured to automatically detect and identify the substance and generate a corresponding report, wherein the report includes a magnified image of the substance; (Barnes: col. 5, line 42 – col. 6 line 45 – "The system 20 of the present invention advantageously allows for gathering and tracking images. The system 20 preferably includes a vehicle mounting interface 21 positioned to be connected to a vehicle. The vehicle mounting interface includes a remotely steerable gimbal 30 which provides at least two axis of pivotal or rotational movement. A compact pod housing 25 is pivotally mounted to the vehicle mounting interface 21 and has at least one window 26, and more preferably a plurality of windows 26,27,28,29 as illustrated in FIGS. 1-6. A spectral sensor 40 is positioned on the steerable gimbal 30 within the pod housing 25 to thereby enable off-nadir scanning, target acquisition, target tracking and analysis of spectral data through the at least one window 26 of the pod housing 25."; col. 16, claim 34 – steps of digitally transmitting spectral data)

It would have been obvious and predictable to one of ordinary skill in the art at the time of the invention to combine the teachings of Wyatt and Barnes. Wyatt teaches an aerosol hazard characterization and early warning network. The system monitors aerosol intrusions. The Barnes system teaches a system for robotic control of imaging data having stearable gimbal mounted on spectral sensor and methods. The system is robotic controlled and highly mobile. The gas and images are tracked and uploaded.

5. **With respect to claim 4**, **(Previously Presented)** Wyatt discloses a method of evaluating a threat posed by a substance, further including the steps of providing the remote server with evaluation tools for automatically evaluating the report in light of other relevant data (interpreted to be the evaluation of the threat posed by and likely movement of the aerosol cloud by the central station, integrated with meteorological data, col. 13 lines 41 - 43, 51 - 54 and 60 - 63).

6. **With respect to claim 5**: (**Cancelled**)

7. **With respect to claim 6**, **(Previously Presented)** Wyatt discloses The method as set forth in claim 1, wherein the response authorities are chosen from the group consisting of local first responders, state agencies, state departments, regional agencies, regional departments, national departments, and national agencies (interpreted to be the access of various respective threat analyses by civil, police, emergency and other agencies responsible for population health and safety throughout and surrounding the monitored region through telemetry means, col. 13 line 65 - col. 14 line 3).

8. **With respect to claim 7**, **(Previously Presented)** Wyatt discloses The method as set forth in claim 1, wherein the evaluation authorities include experts on subjects chosen from the group consisting of medical issues relating to exposure to chemical substances, medical issues relating to exposure to biological substances, medical issues relating to exposure to radioactive substances, law, law enforcement, policy, doctrinal issues, historical cases, modeling, and simulation(interpreted to be the access of various respective threat analyses by civil, police, emergency and other agencies responsible for population health and safety throughout and surrounding the monitored region through telemetry means, col. 13 line 65 - col. 14 line 3).

9. **With respect to claim 8**: **(Previously Presented)** Wyatt discloses the method as set forth in claim 1, wherein the image of the substance is a microscope-magnified image (Barnes: col. 5, line 42 – col. 6 line 45 – "The system 20 of the present invention advantageously allows for gathering and tracking images. The system 20 preferably includes a vehicle mounting interface 21 positioned to be connected to a vehicle. The vehicle mounting interface includes a remotely steerable gimbal 30 which provides at least two axis of pivotal or rotational movement. A compact pod housing 25 is pivotally mounted to the vehicle mounting interface 21 and has at least one window 26, and more preferably a plurality of windows 26,27,28,29 as illustrated in FIGS. 1-6. A spectral sensor 40 is positioned on the steerable gimbal 30 within the pod housing 25 to thereby enable off-nadir scanning, target acquisition, target tracking and analysis of spectral data through the at least one window 26 of the pod housing 25."; col. 16, claim 34 – steps of digitally transmitting spectral data)

10. **With regards to claim 10: (Previously Presented)** Barnes teaches wherein the remote sensing units are deployed by being airdropped into an area containing a potentially hazardous substance (Barnes: col. 4, lines 5-67 - spectral sensor system attached to aircraft to track changes in gas target rate)

It would have been obvious and predictable to one of ordinary skill in the art at the time of the invention to combine the teachings of Wyatt and Barnes. Wyatt teaches an aerosol hazard characterization and early warning network. The system monitors aerosol intrusions. The Barnes system teaches a system for robotic control of imaging data having stearable gimbal mounted on spectral sensor and methods. The system is robotic controlled and highly mobile. The gas and images are tracked and uploaded.

11. **With regards to claim 11**: **(currently amended)** Wherein the remote sensing units act upon hitting ground to properly position various operational elements of remote sensing units for sample collection. (Barnes: col. 4, lines 5-67 – system steered by operator; Abstract - Each detector station contains an aerosol handling unit that samples and transfers ambient aerosol particles one-at-a-time through a light scattering chamber where each such particle is constrained to pass through a fine laser beam producing, thereby, an outgoing scattered light wave.)

It would have been obvious and predictable to one of ordinary skill in the art at the time of the invention to combine the teachings of Wyatt and Barnes. Wyatt teaches an aerosol hazard characterization and early warning network. The system monitors aerosol intrusions. The Barnes system teaches a system for robotic control of imaging

data having stearable gimbal mounted on spectral sensor and methods. The system is robotic controlled and highly mobile. The gas and images are tracked and uploaded.

12. **Claims 3 and 4** are also rejected under 35 U.S.C. 103(a) as being unpatentable over **Wyatt** in view of **42 USC 11023 (a)** (enacted October 17, 1986).

13. **With respect to claim 3**: **(Currently Amended)** Wyatt discloses a method of evaluating a threat posed by substance (reference provides an aerosol hazard classification and early warning network, see abstract), the method comprising the steps of: deploying a plurality of remote sensing units and a control unit adapted to substantially automatically identify the substance and to provide a corresponding report (detector stations capable of measuring and classifying aerosol particles, col. 8 lines 34 - 44); uploading the report to a remote server (detector stations capable of measuring and classifying aerosol particles, and reporting all processed data via integrated telecommunications to a central control station, col. 8 lines 29 - 45); establishing a hierarchy of threat evaluators, including a plurality of experts having knowledge relevant to making a high-level threat assessment (interpreted to be the sending of threat analyses to various civil, police, emergency and other agencies responsible for population health and safety throughout and surrounding the monitored region, col. 13 line 65 - col. 14 line 3); and allowing the hierarchy of threat evaluators to access the report on the remote server via a wide area network (interpreted to be the access of various respective threat analyses by civil, police, emergency and other agencies

responsible for population health and safety throughout and surrounding the monitored region through telemetry means, col. 13 line 65 - col. 14 line 3).

14. In the event that **Wyatt** may be determined not to disclose the remaining limitations of **claim 3, 42 USC 11023(a)** teaches the remaining limitations of claim 3.

15. **42 USC 11023 (a)** requires that the operator of a facility subject to the requirements of the section complete and submit a toxic chemical release form to the EPA Administrator and to an official or officials of the State designated by the Governor of the respective state. 42 USC 11023 (a) is therefore interpreted to provide a method of identifying an appropriate local reporting authority (the State in which the toxic chemical was released) and an appropriate local reporting policy based upon an actual geographic location of the substance (the Governor of the State in which the toxic chemical was released designates official(s) for the report to be submitted to, i.e. a local reporting policy). 42 USC 11023 (a) is also interpreted to provide a method for notifying the appropriate local reporting authority of the report in accordance with appropriate local reporting policy (a report must be submitted to an officials designated by the Governor of the State).Thus, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the method of Wyatt with local reporting and associated policies based on geographic locations required by 42 USC 11023(a)in order to provide a more efficient and useful method of evaluating a threat posed by a substance.

16. **With respect to claim 4**, Wyatt discloses a method of evaluating a threat posed by a substance, further including the steps of providing the one or more data processing and storage servers with evaluation tools for substantially automatically evaluating the report in light of other relevant data (interpreted to be the evaluation of the threat posed by and likely movement of the aerosol cloud by the central station, integrated with meteorological data, col. 13 lines 41 -43, 51 - 54 and 60 - 63).

17. **Claim 9** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Wyatt** as applied to claim1 above, and further in view of **Ishizaka et al. (U.S. 5,077,010)** (Hereinafter referred to as **Ishizaka**).

18. **With respect to claim 9**, **(Previously Presented)** Wyatt discloses the above method steps, Wyatt does not explicitly further comprising collecting the substance with a sample examination cassette including: a roll of filter paper for receiving the substance; a roll of film providing an impermeable barrier for isolating the substance; and an archive spool for collecting the roll of filter paper and the roll of film. However, Ishizaka teaches a long- test-film cassette for biochemical analysis and system for loading the same which teaches a roll of filter paper for receiving the substance (Ishizaka, Fig 1, item 7); a roll of film providing an impermeable barrier for isolating the substance (Ishizaka, Fig 1, item 3); and an archive spool for collecting the roll of filter paper and the roll of film (Ishizaka, Fig 1, item 2). It would have been obvious to combine the aerosol hazard characterization and early warning network of Wyatt with the long-test-film cassette for biochemical analysis of Ishizaka in order to record and

archive the data produced from the system of Wyatt, since so doing could be performed readily and easily by any person of ordinary skill in the art, with neither undue experimentation, nor risk of unexpected results.

CONCLUSION

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Heidi Riviere whose telephone number is 571-270-1831. The examiner can normally be reached on Monday-Friday 9:00am-5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janice Mooneyham can be reached on 571-272-6805. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/H. R./
Examiner, Art Unit 3689

/Janice A. Mooneyham/
Supervisory Patent Examiner, Art Unit 3689